

Exceptional service in the national interest**Sandia
National
Laboratories**

Science and Technology/Division 1000 **FY16 - FY20 Strategic Plan**



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EXECUTIVE SUMMARY

The Science and Technology (S&T) Division 1000 Strategic Plan includes the Themes, Goals, and Actions for FY16. S&T will continue to support the Labs Strategic plan, Mission Areas and Program Management Units by focusing on four strategic themes that align with the targeted needs of the Labs. The themes presented in this plan are Mission Engagement, Bold Outcomes, Collaborative Environment, and the Safety Imperative. Collectively they emphasize diverse, collaborative teams and a self-reliant culture of safety that will deliver on our promise of exceptional service in the national interest like never before.

Mission Engagement focuses on increasing collaboration at all levels but with emphasis at the strategic level with mission efforts across the labs. Bold Outcomes seeks to increase the ability to take thoughtful risks with the goal of achieving transformative breakthroughs more frequently. Collaborative environment strives for a self-aware, collaborative working environment that bridges the many cultures of Sandia. Finally, Safety Imperative aims to minimize the risk of serious injury and to continuously strengthen the safety culture. Each of these themes is accompanied by a brief vision statement, several goals, and planned actions to support those goals throughout FY16 and leading into FY17.

INTRODUCTION

The Science and Technology Division 1000 Strategic Plan was created with considerable participation from all levels of management in the Division, and includes the Themes, Goals, and Actions for FY16 covered below. The plan is intended to chart our course as we strive to contribute our very best in service of the greater Laboratory strategy.

Division 1000 will continue to support the Labs Strategic plan, Mission Areas and Program Management Units by focusing on four strategic themes that align with the targeted needs of the Labs. The themes are: Mission Engagement, Bold Outcomes, Collaborative Environment, and the Safety Imperative. They emphasize diverse, collaborative teams and a self-reliant culture of safety that will deliver on our promise of exceptional service in the national interest like never before. Each theme is accompanied by a brief vision statement, several goals, and planned actions to support those goals throughout FY16 and leading into FY17.

This is not a strategy to be pursued in tension with the Laboratory strategic plan. Rather, it is intended to describe “how” we propose to show-up for the “what” described in Sandia’s Strategic Plan. The Division Leadership Team welcomes your feedback and looks forward to a dialogue about these strategic themes.

1. MISSION ENGAGEMENT

Vision - *We will increase our collaboration at the strategic level with mission efforts across the Lab.*

The overarching mission of the Laboratories is strategic national security. A culture of national service and stewardship coupled with a passion for technical and operational excellence allows extremely talented and energized teams to develop and deploy high-impact solutions for the nation and the world. In support of Sandia’s strategic objectives, Division 1000 must reach out to the rest of the Lab to increase our engagement and teaming across Labs. Division 1000’s suite of foundational capabilities must be clearly and seamlessly integrated into the critical strategies and tactics of the Mission Areas (MAs) and Program Management Units (PMU), adding value, differentiation, and impact to their work and providing a high-level of mutual respect, empathy, and trust across the Division and Lab. This engagement must create a fuller sense of one Lab and achieve a greater clarity, understanding, and engagement with all MAs of the Lab. Division 1000 in return must ensure that our capability stewardship (including prioritization and investment/disinvestment decisions) is reflective of the Lab/MA strategies.

Goals and Actions

1.1 Understand current state of our Mission Area/Program Management Unit engagement

Division 1000 personnel at all levels are engaged with Sandia’s MAs and PMUs and contribute to their success. We must ensure that this is happening strategically across the Division to capitalize on today’s successes, and eliminate barriers that are getting in the way.

Actions:

- 1.1.1 Interview key members of the mission community to understand their view of the contribution we currently make to the mission.
- 1.1.2 Identify barriers to strategic engagement between research and mission communities

1.2 Organize for more strategic engagement with the mission

Sandia’s Research Foundations must be more proactive and agile, using a framework for making focused capabilities decisions aligned with Sandia’s MA strategies. It is Division 1000’s responsibility to steward and sustain our capabilities and competencies for the MAs and PMUs current and future mission needs. In addition, we must consider varying time scales of the MAs and how this impacts product development possibilities.

Actions:

- 1.2.1 Ensure every PMU and Mission Area strategy team has at least one Division 1000 director and that all Division 1000 directors have such a role. Further support this intent with senior managers and senior scientists serving individually or in deputy roles.
- 1.2.2 Align Division 1000 Mission Area strategic engagement with the new Lab Strategic Objective 1.
- 1.2.3 Create a forum to communicate across Division 1000 best practices with regard to mission engagement.

1.3 Create, communicate, and execute a strategic engagement plan

Success will require a deeper understanding of the mission requirements and values, and mission area understanding of the research foundation capabilities. We must demonstrate or show a strong value proposition for both the MAs and the Research Foundations. The result will build trust and create a true partnership.

Actions:

- 1.3.1 Develop a coordinated R&D investment plan that is aligned with Lab, Mission Area, and Division strategies and with the Bold Outcomes theme.
- 1.3.2 Demonstrate continuously increasing S&T impact on the Annual Assessment Review process.

2. BOLD OUTCOMES

Vision - *We will increase our ability to take thoughtful risks with the goal of achieving transformative breakthroughs more frequently.*

Sandia does a lot of amazing work, and our engineering and scientific advances inspire us all. In an era of extraordinary technological change and rapid evolution in threats to our national security, the nation needs us to increase the frequency and aspiration of our breakthroughs. Therefore, we need to:

- Be more comfortable leading the Sandia and national agenda instead of just responding to it.
- Anticipate national needs and make prescient investments well in advance of customer requests.
- Accept that a dearth of failed research projects means that we aren't taking enough risks with our investments.

In short, we need to be bold.

Boldness can take many forms. We can be bold in our scientific and engineering aspirations, in our program development efforts, and in our mission outcomes. Most importantly, we need to be bold in our culture; to be more willing to take technical and programmatic risks. It's hard to deny that Sandia has a cautious, conservative corporate culture. We have a hard time accepting failure, even if occasional missteps are a necessary part of discovery. Given our unique responsibility for the safety and security of nuclear weapons, a culture of careful incrementalism is a very good thing. But in some situations, we can best serve the Lab and the nation by being more aspirational and embracing more risk. Cultures are resilient, and it will take concerted effort to make ours more bold. We need to be more tolerant of failure. We need to have more faith in our vision of the future, even when others don't yet see what we see.

For Sandia, bold outcomes will require increased focus on prioritization and greater collaboration. It will involve working together across all of Sandia on more aspirational and strategic proposals and projects. It will require a willingness to say "no" to less strategic efforts to allow us to focus on activities with greater potential for transformative impact.

The goals and actions we are proposing are not particularly bold in and of themselves. Rather, they are a first step towards evolving our culture and our structure to increase the space for bold undertakings and outcomes.

Goals and Actions

2.1 Assert national leadership in differentiating capabilities for national security

Division 1000 will pilot and test this management model, building on our Division capability health assessments. We will assess what it takes to be a healthy capability, and identify opportunities for program development or Lab investments to sustain and enhance our capabilities. Division 1000 will identify bold capability investment opportunities and coordinate across the Division and Lab to make them happen.

Actions:

- 2.1.1 Create and pilot a model for strategic management of capabilities.
- 2.1.2 Collectively develop and begin execution of strategic plans for CHIP2, ICF/HED, National Strategic Computing Initiative, and the Research Reactor Facility.

2.2 Enhance mission impact through execution of our research strategy

Sandia's Research Challenges (RCs) are bold by design. Anything we can do to move them forward will support the overarching goal of achieving bold outcomes. Members of Division 1000 play leadership roles in many of the individual RCs and have broader influence on the RC and LDRD constructs through roles on RLT. In these roles we need to continue to mature the RC concept and drive its effective execution. We should encourage and reward coordination between RCs and the Mission Areas to support particularly bold mission outcomes.

Actions:

- 2.2.1 In collaboration with a Mission Area, develop at least one road map for a decadal challenge that can be addressed through coordinated Research Challenge and Grand Challenge efforts.
- 2.2.2 Re-examine LDRD structure with the intent to better support strategic and bold outcomes.

2.3 Establish Sandia's strategic academic alliance

An enhanced model for collaboration and partnership between Sandia and a select handful of research universities has been developed. As Sandia's Science and Technology Division we must play a central role in maturing this new partnership model.

Actions:

- 2.3.1 Execute at least one example of each of the Academic Alliance goals:
 - Define the future of engineering for national security
 - Conduct joint strategic R&D
 - Substantially increase recruiting from Alliance schools

2.4 Encourage a culture of thoughtful risk taking and bold action

Many of the impediments to bold actions are of our own making and are within our power to change. However, culture is resilient and change requires conscious and sustained commitment. We need to increase our comfort with risk and revise our attitude about failure. We need to consistently communicate our intentions and expectations, and demonstrate commitment through our actions and how we use our reward systems.

Actions:

- 2.4.1 In collaboration with staff and management, identify opportunities for enhancing boldness across Division 1000.
- 2.4.2 Identify key program/technical areas that could benefit from collaboration across Division 1000.
- 2.4.3 Develop a business rhythm for DC assignments to provide growth opportunities and help inform national policy.

3. MORE COLLABORATIVE ENVIRONMENT

Vision - *We will strive for a self-aware, truly collaborative working environment that bridges Sandia's many cultures.*

A recent Harvard Business Review paper, Sull et al. ("Why Strategy Execution Unravels – and What to Do about It," Harvard Business Review, March 2015 issue, <https://hbr.org/2015/03/why-strategy-execution-unravelsand-what-to-do-about-it>), discusses research conducted in large complex business organizations which demonstrates that the execution of strategy "lives and dies with a group we call 'distributed leaders,' which includes not only middle managers who run critical businesses and functions but also technical and domain experts who occupy key spots in the informal networks that get things done." The paper goes on to say that "Distributed leaders, not senior executives, represent 'management' to most employees, partners, and customers. Their day-to-day actions, particularly how they handle difficult decisions and what behaviors they tolerate, go a long way toward supporting or undermining the corporate culture." And while "84% of managers (surveyed) say they can rely on their boss and their direct reports all or most of the time...only 9% say they can rely on colleagues in other functions and units all of the time, and just half say they can rely on them most of the time." This leads managers to "compensate with a host of dysfunctional behaviors that undermine execution: They duplicate effort, let promises to customers slip, delay their deliverables, and pass up attractive opportunities."

These learnings can inform our efforts to enable the success of Division 1000's leadership commitment to Bolder Outcomes, Increased Mission Engagement, and the Safety Imperative, by altering the current state paradigm regarding vertical and horizontal collaborative relationships both inside Division 1000 and with other Divisions at the Lab. A likely assumption many of us will make is that collaboration at the Lab is currently thriving. However, our Division Strategic Theme of a "more collaborative environment" is aimed at elevating our level of collaboration and cross-function partnerships to an entirely different level. Sull et al.'s research indicates that an increased level of teaming, and awareness of others and their work, can propel Sandia into an even stronger more unified entity that bridges the three cultures—mission execution, ST&E, and mission support. This begins with the modeled behavior and commitment of our leadership team. Through the development of self-awareness and increased understanding of organizational capabilities and mission, our intent with this Division 1000 Strategic Theme is that we will work with our Sandia partners to build new and more meaningful "distributed leadership networks" which span Sandia's business functions (e.g. ST&E, Mission Support, and the PMU's) towards improved strategic execution, embodied in the three other Division 1000 Strategic Themes (Bolder Outcomes, Increased Mission Engagement, and the Safety Imperative). Our Vision for a "More Collaborative Environment" (Theme 3) is for a more self-aware, truly collaborative working environment that bridges three cultures at Sandia—mission execution, ST&E, and mission support including differentiating improvements in leadership awareness and development and demonstrated model behavior, especially as regards working through others. We hope to achieve an increased level of teaming and awareness of others and their work as well as organizational capabilities and missions throughout the Division.

Goals and Actions

3.1 We'll start by assessing our Division culture of collaboration to answer key questions:

Actions:

- 1.1.1 Who partners with whom and why?
- 1.1.2 What characterizes the most productive collaborations?
- 1.1.3 What are the barriers to a more collaborative environment and how can we lower them?

3.2 Following this assessment, we'll move to identify specific steps leaders can take to increase collaboration and create "distributed leadership networks."

Actions:

- 3.2.1 Initiate new activities/coordinate existing activities to increase awareness of work in and beyond the Division.
- 3.2.2 Demonstrate our commitment with leadership participation in these events/activities. Set the example.

3.3 We'll also initiate specific efforts to accelerate our development as leaders.

Actions:

- 3.3.1 Following the lead of the Division 1000 directors in establishing a relationship with a professional coach in FY15, most of the senior managers will do so in FY16.
- 3.3.2 Each center will evaluate the current state of formal coaching or mentoring activities within the center, compare across the Division, and develop a three-year coaching/mentoring plan/strategy that includes FY16 coaching/mentoring for one-third of center member for whom it would be beneficial.
- 3.3.3 Each center will evaluate the current state of management training activities (past and present), compare across the Division, and develop a three-year management training plan/strategy that includes FY16 training for half of center managers for whom additional training would be beneficial

3.4 Finally, we'll take concrete steps to cultivate collaboration and inclusion in our daily work environment.

Actions:

- 3.4.1 Select two or three teams that will be formed in FY16 to prototype "in situ learning" test beds, and develop and implement execution plans for each team.
- 3.4.2 Implement universal management training in Effective Leadership of Inclusive Teams (ELOIT) across the Division.

4. SAFETY IMPERATIVE

Vision - *We will minimize the risk of serious injury and continuously strengthen our safety culture.*

A vision statement often describes the destination toward which progress should be made. For this theme, we are on a journey—one of continual improvement with the goal of becoming an "interdependent" safety culture. Such a culture is characterized by aspects such as instinctively incorporating safe behaviors into our lives, caring for others, and operating with excellence in all ways, including safety.

We have a responsibility to ourselves and our colleagues to perform our work safely. Because of the visibility that comes with Division 1000 having the greatest number of hazardous facilities and operations at Sandia National Laboratories, it is incumbent upon us to be diligent in pursuing continuous safety improvement. Failure can mean human tragedy, loss of moral authority, and loss of privilege to do mission work. We take pride in how we execute our work, not only at these facilities but in all of the work that we do. We aren't complacent about operational excellence, and so it is part of everything we do. It is foundational to all our strategic themes. In fact, our vision is that our safety culture goes beyond hazardous activity-level work to how we think about safety in our office work and daily routines.

To help us along this journey, we are committed to taking actions under the following four goals:

1. *Move from a "dependent" safety culture to an "independent" one*

2. *Increase healthy communication with the goal of deepening our collective understanding of safety*
3. *Explore the concept of predictive safety*
4. *Practically improve implementation of Engineered Safety and Work Planning & Control (WP&C)*

We will periodically assess progress on these goals, and will adjust them, and add additional goals if necessary, as the journey continues into the future.

Goals and Actions

4.1 Move from a “dependent” safety culture to an “independent” one

When we examine the results of the recent DuPont survey, it is clear that our Division has not yet achieved a state in which everyone views safety is an integral part of work; it is still viewed as an add-on by many. Hence, we need to do a better job of fully integrating safety in all aspects of work, from planning through execution to close-out. Ideally, the process of doing so will not be stove-piped within each Center; establishing a Division-level Operations Excellence Council is intended to contribute to avoiding unnecessarily inefficient or separate approaches.

One important comment that stood-out in the survey concerned a general failure to recognize positive safety performance. We have a goal of rectifying this deficiency throughout the Division.

Discussion of several other common themes from the survey in a number of informal settings surfaced a secondary theme—which is it’s important for us to evolve from a compliance- or rules-based culture to one that is principles-based. This, in turn, led to two additional actions. First, the Division should establish and widely communicate a governing set of operational principles, including implicit and explicit principles pertinent to safety. And second, processes and actions for moving forward on this safety journey should be defined with input from all levels of the Division; from the Vice President down through members of technical staff, technologists, and other members of the workforce.

Actions:

- 4.1.1 Stand up a representative Operations Excellence Council with initial focus on safety.
- 4.1.2 Establish and communicate Division-specific safety principles.
- 4.1.3 Integrate safety considerations as an essential element of our strategic thinking.
- 4.1.4 Publicly recognize positive steps forward in our safety culture.
- 4.1.5 Increase use of an inclusive, all-level team approach to establish safety practice and policy.

4.2 Increase healthy communication with the goal of deepening our collective understanding of safety

Experience from the roll-out of engineered safety Division-wide, as well as comments from the DuPont survey, highlight the fact that incomplete or misunderstood communications, inattention to crafting messages appropriately for different audiences, and many other common barriers to effective communications are a significant impediment to achieving a common and wide-spread safety culture in the Division, and certainly can inhibit improvement in that culture. Thus, we have the goals of actively encouraging dialogue; both about difficult topics and also in more venues than in standard organizational or safety-group meetings. Also, we have an action aimed specifically at making sure that the audience is carefully considered when communications are being crafted, especially if those communications are originating in the upper levels of the Division.

Actions:

- 4.2.1 Convene dialogue sessions concerning difficult safety topics.
- 4.2.2 Encourage safety-related dialogue between and among all levels within the Division.
- 4.2.3 Craft and deliver safety messages well-tuned to the needs of different division audiences.

4.3 Explore the concept of predictive safety

One aspect of achieving a safe work environment is anticipating potential problems and implementing mitigations before events occur. We have defined two actions in this arena. First, we will work to define and pilot safety-related leading indicators, both at a Division-level and potentially others for more site- or organization-specific use. Second, we will engage Professor Nancy Leveson at MIT and partner with Division 4000 to design a system for identifying organizations that may have a higher probability of experiencing an event so that potential compensatory measures can be worked before an event occurs.

Actions:

- 4.3.1 Define and pilot a set of leading safety-related indicators.
- 4.3.2 Partner with Division 4000 and outside experts to design a system capable of predicting increased risk of experiencing a negative event.

4.4 Practically improve Division implementation of Engineered Safety & Work Planning & Control (WP&C)

We will seek to move toward excellence in our implementation of work planning & control by defining opportunities to streamline the efficiency of implementation. Achieving “excellence” and optimizing “efficiency” will be different for different operations and organizations; the goal will be to do exactly what is right in each case, and no more.

Actions:

- 4.4.1 Execute the Division safety case reviews planned for FY16, incorporating lessons learned from FY15 safety case reviews.
- 4.4.2 Streamline our joint implementation of Engineered Safety and WP&C.
- 4.4.3 Pilot with the Sandia Field Office (SFO) a more collaborative oversight model for operations.

REFERENCES

Provide links to the following documents

1. Division 1000 Strategy for FY16 Goals and Actions Trifold revision 1/12/16
<https://prod.sandia.gov/science-tech/wp-content/uploads/2015/11/Strategic-themes-trifoldversion11-11-15.pdf>
2. Division 1000 Science & Technology Strategic Plan web page <https://prod.sandia.gov/science-tech/strategy/>
3. Science and Technology Strategy Map (See Appendix I)

Appendix I

The Science and Technology Strategy Map

The Learning Map is a metaphorical drawing of our Science and Technology strategic journey. It is a way of conceptually communicating the environmental context (why are we pursuing these themes?) and intent of our four Strategic Themes (what do we want to accomplish?). Since approximately **65%** of people are visual learners and **90%** of information that comes to the brain is visual, the learning map is a way to capitalize on how most people process information. The following paragraphs will walk you through the various elements of the S&T Learning Map from the overall external environment, how the S&T community must respond to that environment, desired future state, and how the strategic themes will help us get to this future state.

S&T: The Shield (the top part of the visual)

S&T is continuing to support the Mission Areas by focusing on four strategic themes that align with the targeted needs of the lab. The shield is meant to represent our desired future state that the work we perform and must do even better in the future to support the mission areas. The goal is to improve our country's national security from a set of ever-changing external environmental threats. The people under the shield are a representation of our ultimate customer; the citizens of our country. Examples of the external environmental threats are represented on the upper right of the map above the shield.

The Mission Area Tower (to the left of the platform)

It is our job within S&T to ensure that we both influence the Mission Area strategies in their creation as well as align with them in our execution of our S&T strategy and work. The tower represents this mission engagement. The picture depicts the collaboration needed between the S&T community, the PMUs and MAs to achieve the overarching Lab goal of improving our countries national security. You can see a representative entering the tower with our S&T engagement plan and the MA strategy coming out of the tower and circling back in the platform at the center with the S&T Strategic Themes.

The Circular Platform in the Center

The circular platform in the center of the visual shows S&T's four strategic themes.

- Mission Engagement
- Bold Outcomes
- Collaborative Environment
- Safety Imperative

The vision, goals, and actions for each theme are covered in-depth in the preceding sections of this white paper. The visual shows how the themes and the S&T community must work in unison to generate the solutions, capabilities, and scientific discovery needed to deliver on our promise of exceptional service in the national interest like never before. The center of the platform shows this generation. The visual also shows how the S&T community through the themes must be connected to the rest of Sandia and the external community via a set of trusted partnerships. By executing the themes in collaboration with the partners depicted in the map we will achieve a more vibrant research environment, with challenging problems to solve and a more stable investment environment.

Coming out of the right of the platform are new capabilities and solutions to improve the shield.

Figure 1 The Learning Map



Appendix II

Science and Technology Linkage to Sandia's Strategic Plan Goals and Milestones

The following table maps the Laboratories Strategic Plan's goals and milestones where the Division 1000 VP or a Director owns the objective or milestone to the Science and Technology Strategic Themes goals and actions. This shows how the S&T plan contributes to the Labs plan. The Labs goals or milestones owned by someone outside of Division 1000 are not included.

Lab Goal	Lab Milestone	Deliverable	Division 1000 Strategic Theme Objective	Division 1000 Strategic Theme Action
Goal 1: Executive Sandia's nuclear weapon mission with excellence	M1.1.2: Partner with LLNL and LANL weapons science and inertial confinement fusion (ICF) communities to develop an integrated and coordinated national high energy density (HED) effort on the nation's three major ICF/HED facilities by FY16 Q4.		Strategic Theme 2: Bold Outcomes Goal 2.1: Assert national leadership in differentiating capabilities for national security	2.1.2 Collectively develop and begin execution of strategic plans for CHIP2, ICF/HED, National Strategic Computing Initiative, and the Research Reactor Facility.
	M1.1.3: Create a plan for the NW mission area to strengthen and enables the Labs' foundation and other mission areas.		Strategic Theme 1: Mission Engagement Goal 1.1: Understand current state of our MA/PMU engagement. Goal 1.2: Organize for more strategic engagement with mission. Goal 1.3: Create, communicate, and execute a strategic engagement plan	1.1.1 Interview key members of the mission community to understand their view of the contributions we currently make to mission. 1.1.2 Identify barriers to strategic engagement between research and mission communities. 1.2.1 Ensure every PMU and MA has at least one Div 1000 director and that all Div 1000 directors have such a role. Further support this intent with sr managers and sr scientists serving individually or in deputy roles. 1.3.1 Develop a coordinated R&D investment plan that is aligned with Lab, MA, and div strategies and with the Bold Outcomes theme. 1.3.2 Demonstrate continuously increasing S&T impact on the Annual Assessment Review process.

Lab Goal	Lab Milestone	Deliverable	Division 1000 Strategic Theme	Division 1000 Strategic Theme Action
Goal 1: Integrate the Labs' foundation and mission areas to assure strategic priorities guide decision and investments.	M2.1.1: Advance the Labs' capabilities management model by translating and incorporating mission areas strategic priorities into CTO, Division, and Mission Support business plans and investment decisions.		Strategic Theme 2: Bold Outcomes Goal 2.1 Assert national leadership in differentiating capabilities for national security	2.1.1 Create and pilot a model for strategic management of capabilities.
	M2.1.2: Align and implement a set of mature Laboratory Research Challenges as an element of the Labs' strategic framework.		Strategic Theme 2: Bold Outcomes Goal 2.2 Enhance mission impact through execution of our research strategy	2.2.1 In collaboration with a Mission Area, develop at least one road map for a decadal challenge that can be addressed through coordinated Research Challenge and Grand Challenge efforts. 2.2.2 Re-examine LDRD structure with intent to better support strategic and bold outcomes.
Goal 2: Enhance strategic focus and decision-making regarding our unique facilities and tools to effectively balance meeting current mission needs and enabling future agility to respond.	M2.2.1: Develop a Laboratories' strategy and funding mechanism for capitalization and recapitalization of foundation science and engineering equipment and tools by FY16 Q3 and make investment decisions for FY17 by FY16 Q4.		Strategic Theme 1: Mission Engagement Goal 1.3: Create, communicate, and execute a strategic engagement plan. Strategic Theme 2: Bold Outcomes Goal 2.1 Assert national leadership in differentiating capabilities for national security	1.3.1 Develop a coordinated R&D investment plan that is aligned with Lab, Mission Area, and division strategies and with the Bold Outcomes theme. 2.1.1 Create and pilot a model for strategic management of capabilities.
	M2.2.2: Further develop the Common Engineering Environment (CEE) with participation from divisions and PMUs and implement CEE best practices and preferred tools Lab-wide.		Strategic Theme 1: Mission Engagement Goal 1.3: Create, communicate, and execute a strategic engagement plan.	1.3.1 Develop a coordinated R&D investment plan that is aligned with Lab, Mission Area, and division strategies and with the Bold Outcomes theme.
Goal 3: Attract and develop talent to fulfill our current and future national security missions	M2.3.1: Deploy the integrated strategy developed in 2015 to improve cyber, computer science, and computer engineering talent attraction and retention; apply best practices more broadly to people in key mission areas in the future.		Strategic Theme 1: Mission Engagement Goal 1.3: Create, communicate, and execute a strategic engagement plan.	1.3.1 Develop a coordinated R&D investment plan that is aligned with Lab, Mission Area, and division strategies and with the Bold Outcomes theme.
	M2.3.2: Create and implement more high-quality leadership development opportunities (e.g., training programs, forums, etc.) for first level managers.		Strategic Theme 3: Collaborative Environment Goal 3.3 Accelerate our own development as leaders	3.3.3 Each center will evaluate the current state of management training activities (past and present), compare across the division, and develop a three-year management training plan/strategy that includes FY16 training for half of center

				managers for whom additional training would be beneficial.
Goal 4: Enable, through research, bold technical outcomes that can qualitatively advance the Laboratories Capabilities	M2.4.1: Develop a clear philosophy for Sandia's research portfolio selection and management process and Sandia's position toward high risk/ high reward opportunities.		Strategic Theme 1: Mission Engagement Create, communicate, and execute a strategic engagement plan. Strategic Theme 2: Bold Outcomes Goal 2.4 Encourage a culture of thoughtful risk taking and bold action.	1.3.1 Develop a coordinated R&D investment plan that is aligned with Lab, Mission Area, and division strategies and with the Bold Outcomes theme. 2.4.2 Identify key program/technical areas that could benefit from collaboration across Division 1000.
	M2.4.2: Increase the value proposition for customers to fund and advocate for research, including clearly defining the role of research in NW going forward.		Strategic Theme 1: Mission Engagement Understand current state of our MA/ PMU engagement Strategic Theme 2: Bold Outcomes Goal 2.2 Enhance mission impact through execution of our research strategy	1.1.1 Interview key members of the mission community to understand their view of the contributions we currently make to mission. 2.2.1 In collaboration with a Mission Area, develop at least one road map for a decadal challenge that can be addressed through coordinated Research Challenge and Grand Challenge efforts. 2.2.2 Re-examine LDRD structure with intent to better support strategic and bold outcomes.
Goal 5: Strengthen the science and engineering foundation of the Laboratories by building focused, strategic partnerships.	M2.5.1: Identify a framework and criteria for strategic partnerships with industry and other laboratories by FY16 Q2. Enter into strategic partnerships with three key partners by FY16 Q4.		Strategic Theme: 2 Bold Outcomes Goal 2.3 Establish Sandia's strategic academic alliance	2.3.1 Execute at least one example each of the academic alliance goals

Goal	Milestone	Deliverable	Division 1000 Strategic Theme	Division 1000 Strategic Theme Action
Goal 4: Maximize the safety, health, security, and morale of our Sandia community.	M3.4.2: Deploy new tools that simplify our application of engineered safety and WP&C.		Strategic Theme 4: Safety Imperative Goal 4.4: Practically improve implementation of Engineered Safety and Work Planning & Control	4.4.2 Streamline our joint implementation of Engineered Safety and WP&C.